



Name \_\_\_\_\_ Date \_\_\_\_\_

Practice: For use after Lesson 6.3, Algebra 2 with Trigonometry

## Multiplication of Polynomials

Multiply.

1.  $4(3a + 7)$  \_\_\_\_\_

2.  $y^2(y^2 - 8y + 6)$  \_\_\_\_\_

3.  $-5d^2(2a - 3b + c)$  \_\_\_\_\_

4.  $(a + 4)(a + 5)$  \_\_\_\_\_

5.  $(y - 3)(y - 7)$  \_\_\_\_\_

6.  $(n + 6)(n - 2)$  \_\_\_\_\_

7.  $(3x + 1)(x + 5)$  \_\_\_\_\_

8.  $(6a + b)(3a + 2b)$  \_\_\_\_\_

9.  $(5c - 3d)(2c - d)$  \_\_\_\_\_

10.  $(a + 6)(a - 6)$  \_\_\_\_\_

11.  $(n + 3)(n^2 + 5n - 1)$  \_\_\_\_\_

12.  $(2r + 3)^3$  \_\_\_\_\_

## Applications

13. **Geometry** The length of a side of a square is  $x + 5$  cm. Express the area as a polynomial. \_\_\_\_\_

14. **Geometry** A rectangular box is  $x$  units long,  $x - 1$  units wide, and  $x + 2$  units high. Express the volume of the box as a polynomial. \_\_\_\_\_

## MIXED PRACTICE

Perform the indicated operation.

15.  $3x(4x - 5)$  \_\_\_\_\_

16.  $(2y + 9)(y - 5)$  \_\_\_\_\_

17.  $(5d - 2)^2$  \_\_\_\_\_

18.  $(n^2 - 6n + 7) - (n^2 - 3n)$  \_\_\_\_\_

19.  $(r - 2t) + (3r - 6s + t)$  \_\_\_\_\_

Algebra 2  
Unit 4: WS #13